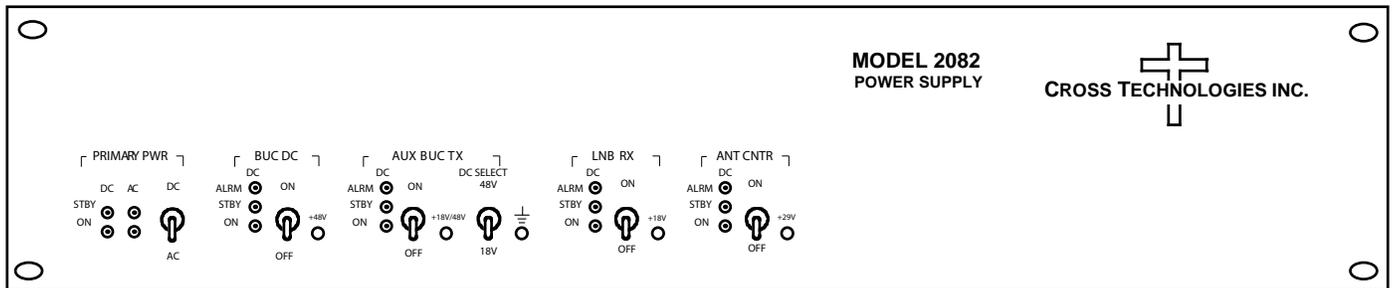


Instruction Manual

Model 2082-1972 DC Power Supply

July 2012, Rev. B



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INSTRUCTION MANUAL
MODEL 2082-1972 DC Power Supply

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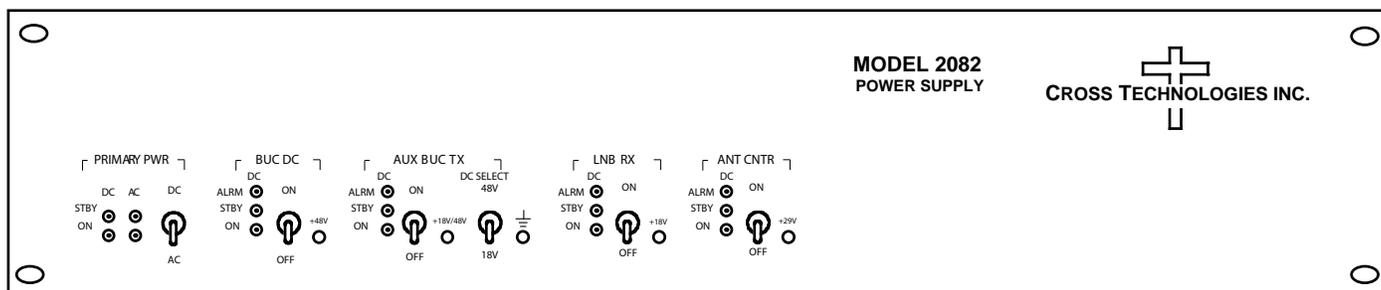
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MODEL 2082-1972 DC Power Supply

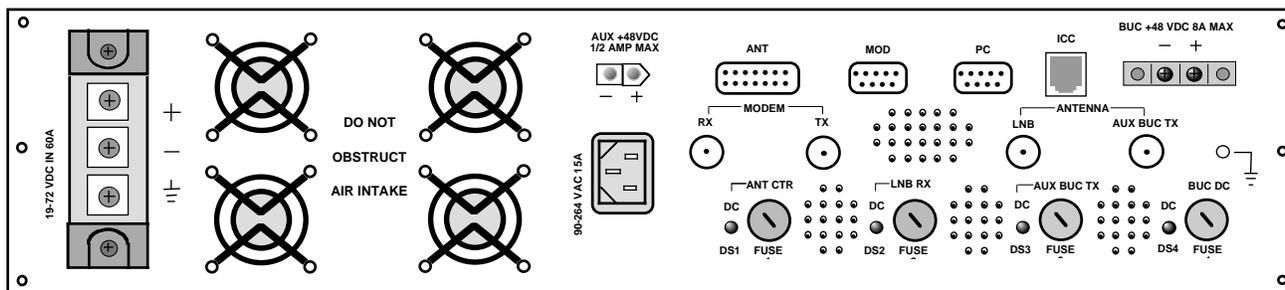
1.0 General

1.1 Equipment Description

The 2082-1972 DC Power Supply is a DC voltage Power Supply used for BUC and LNB applications. DC Power is inserted via two L-Band loop-throughs and a +48 VDC, 8A output is provided on the BUC output. The two L-Band loop-throughs DC insertion, a +18VDC, 1A output is provided on the Antenna LNB input and either +18VDC @ 3A or +48VDC @ 5A is provided on the Antenna AUX BUC TX output. The unit facilitates the installation of a *TracStar*® Antenna Controller and provides the +29V 150W needed with all of the *TracStar*® connectors accessible through the rear panel. Front panel locking toggle switches allow the user to independently disable the DC power on either L-Band loop-through, the BUC DC output and the *TracStar*® antenna controller. The AUX BUC TX and BUC DC output are interlocked to prevent both DC outputs from being simultaneously enabled. The user is also able to select +18VDC or +48VDC insertion on the AUX BUC TX loop-through. A +48VDC @ 500mA AUX output is provided for user devices. Primary power is either 19-72VDC or 90-264 VAC. If both primary power sources are connected the user can select which will be enabled and the other source will be put in a standby mode and serve as a backup power source. If only one primary source is connected, the 2082-1972 Power Supply will use the available power source regardless of the selected primary power source switch position. Each DC power source is fused using rear panel mount fuse holders. Front panel LEDs indicate AC or DC primary power (green), and Standby (yellow). DC output indications are provided for all four outputs (three outputs and the *TracStar*® antenna controller). Front panel LEDs (green) and rear panel LEDs (yellow) indicate the presence of voltage on LNB, BUC, Aux BUC and the *TracStar*®. Front panel LEDs (yellow) indicate the output is in a Standby condition. Front panel LEDs (red) indicate an Alarm condition which is the result of a blown or missing fuse. The alarm condition will only occur if the output is enabled. Front panel test points are provided for each of the four output voltages and ground. All loop-through connectors are TNC female. The unit is housed in a 19.0" - 2RU x 3.50" High x 12.00" Deep chassis.



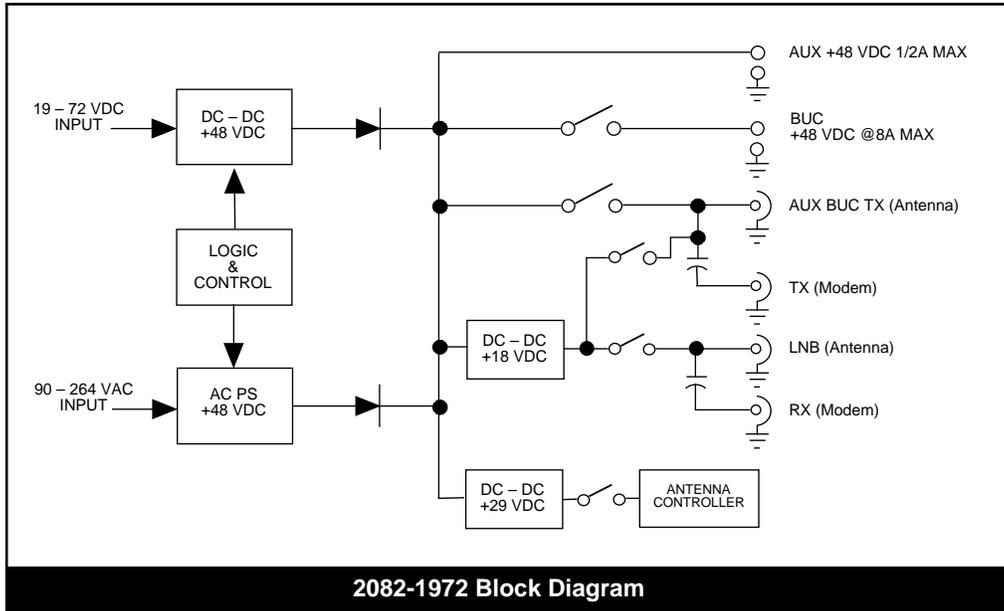
FRONT PANEL



REAR PANEL

FIGURE 1.1 Front and Rear Panels

1.1 Equipment Description (continued)



**FIGURE 1.2 2082-1972 DC Power Supply
Block Diagram**

1.2 Technical Characteristics

TABLE 1.0 2082-1972 DC Power Supply Equipment Specifications*	
— L-Band Insertion —	
RF Input/Output Characteristics	
Impedance/Return Loss	50Ω / 10 dB minimum
Frequency	950 to 2150 MHz and 10 MHz
Insertion Loss	1 ± 0.5 dB (L-Band); 1 dB max. (10 MHz)
Frequency Response	± 1.0 dB, 950 - 2150 MHz; ± 0.5 dB, 36 MHz BW
DC Output Power Characteristics	
Voltage/Current, BUC AUX	+48 VDC, 5 A, max. OR +18 VDC, 3 A selectable
Voltage/Current, LNB	+18 VDC, 1 A, max.
Voltage/Current, BUC	+48 VDC, 8 A, max.
Voltage/Current, <i>TracStar</i> ®	+29 VDC, 5 A, max.
Voltage/Current AUX +48 VDC	+48 VDC, 500 mA max.
Load Regulation	± 5%
Primary Input Power Characteristics	
Voltage/Current, DC	+19 - +72 VDC, 60A, max. 1200W
Voltage/Current, AC	90-264 VAC. 15A, max., 47 - 63 Hz, 1200Q
Connectors	
DC Input	Barrier Strip, M5 screw, 3-10 AWG CU wire
AC Input	Schurter - 6100.3300 with cord Retention
BUC	TBD (Circular Bayonet 2-pin with sockets)
<i>TracStar</i> ®	Refer to <i>TracStar</i> ® documentation
AUX +48 VDC	Molex 2-pin receptacle with sockets (mating connector: (mating connector: Molex 03092022, with pin 02092118).
Other	
RF Connectors	TNC, 50 Ω (female)
(Call for other connectors)	
Size	19 inch, 1 RU, 3.50" X 12.0" D**
Power	19-72 VDC, 1200W OR 90-264 VAC. 47-63 Hz. 1200W
Weight	20 lbs.
<small>*10°C to 40°C; Specifications subject to change without notice. **Does not account for connector protrusion ©TracStar Systems, Inc. 2010 All Rights Reserved.</small>	

2.0 Installation

2.1 Mechanical

The 2082-1972 consists of one RF PCB housed in a 19.0", 2 RU, X 3.50" high X 12.00" deep chassis. Six front panel locking toggle switches allow the user to disable the DC power outputs and insertion on all outputs. The 2082-1972 can be secured to a rack using the 4 holes on the front panel and six side screws for mounting or using rack slides. Figure 2.0 shows how the 2082-1972 is assembled.

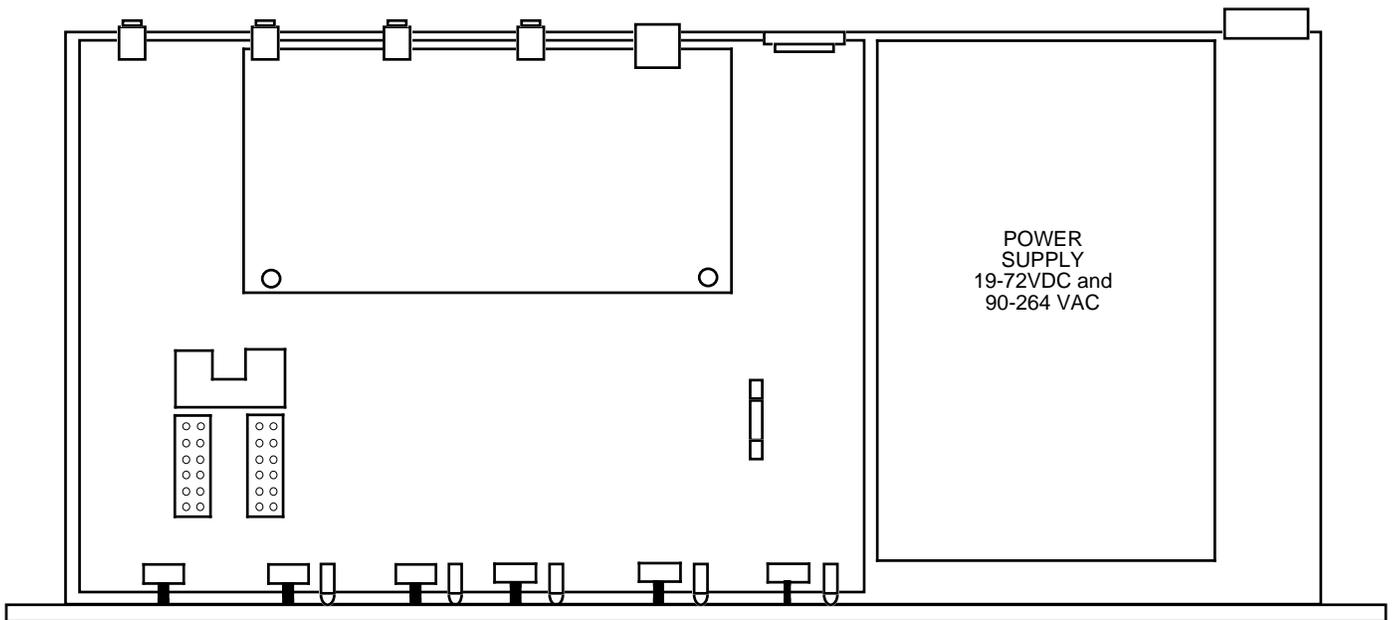


FIGURE 2.1 Mechanical Assembly

2.2 Rear Panel Inputs, Outputs, and Indicators

Figure 2.2 shows the input and output signals and indicators on the rear panel. *TracStar®* I/O5 refer to *TracStar®* documentation.

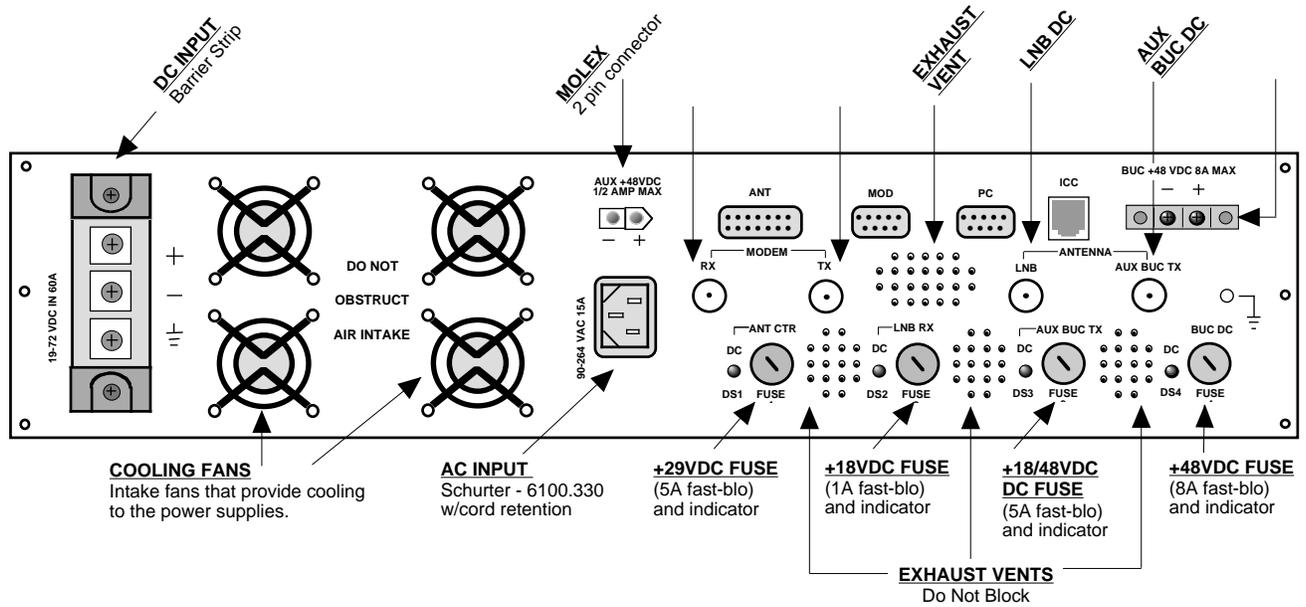


FIGURE 2.2 Rear Panel Outputs

2.3 Front Panel Controls and Indicators

Figure 2.3 shows the front panel controls and indicators.

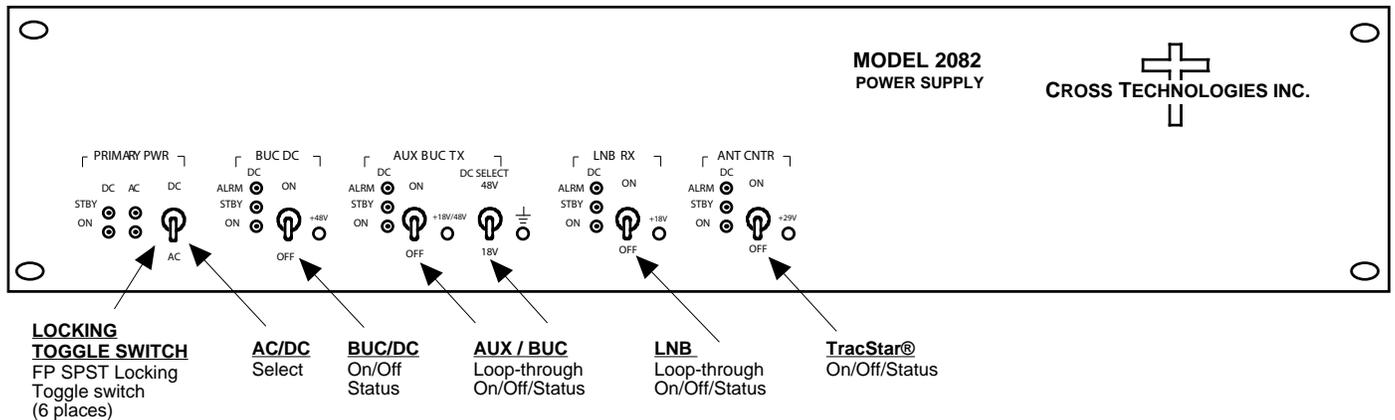


FIGURE 2.3 Front Panel Controls and Indicators

2.4 Installation / Operation

2082-1972 DC Power Supply

1. Connect L-Band Modem to appropriate TX and RX TNC connectors.
2. Connect Antenna to the LNB TNC and the BUC TNC if using the Aux TX power.
3. Connect the BUC DC power to the Ext BUC power connector if using the BUC DC Output terminal block (18-12 AWG depending on length).
4. Ensure the AUX BUC DC Select is in the desired position if using the Aux BUC TX power (either +48VDC or +18VDC).
5. Connect the Aux +48VDC output as desired ensuring not to exceed the 500mA output (mating connector Molex 03092022 w/pins 02092118).
6. Make sure that all of the DC on/off switches are in the off position (switches must be pulled out in order to change positions).
7. Connect desired primary power to the DC input terminal block using a minimum of 8 AWG wire for short distances and 6 AWG or larger (3 AWG max.) for input cables longer than 2 meters. The DC power source must be capable of supply 60A surge and 45A continuous power.
8. Connect the AC input using the supplied AC power cord and move the locking mechanism to secure the connector. The AC power source must be able to supply a minimum of 15A continuous current.
9. Select either AC or DC primary power on the front panel.
10. Apply primary power and verify that the 2082-1972 shows a standby condition on all outputs and the desired primary power source is indicated.
11. Enable DC power outputs as desired. Note: The BUC DC output and Aux BUC TX outputs are interlocked and cannot both be enabled at the same time.

Notes:

1. Connecting or disconnecting rear panel connections while power is enabled will result in damage to the connectors and possibly the 2082-1972 power supply.
2. An alarm indication on the front panel when power is enabled on any of the four outputs indicates a missing or blown rear panel fuse.
3. The Aux +48VDC @ 500mA has a reset able fuse that will open when the output current is exceeded. Should this occur, remove the load from the output and wait five minutes for the fuse to reset. Correct the overloading fault and reconnect the output.

3.0 Environmental Use Information

- A. Rack-Mounting** - To mount this equipment in a rack, please refer to the installation instructions located in the user manual furnished by the manufacturer of your equipment rack. The 2082-1972 power supply must be braced from the rear as well as the 2082-1972 front panel.
- B. Mechanical Loading** - Mounting of equipment in a rack should be such that a hazardous condition does not exist due to uneven weight distribution.
- C. Elevated Operating Ambient Temperature** - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack may be greater than room ambient temperature. Therefore, consideration should be given to Tmra.
- D. Reduced Air Flow** - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. Additional space between units may be required.
- E. Circuit Overloading** - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits could have on over current protection and supply wiring. Appropriate consideration of equipment name plate rating should be used when addressing this concern.
- F. Reliable Earthing** - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connection to the Branch (use of power strips).
- G. Top Cover** - There are no serviceable parts inside the product so, the Top Cover should not be removed. If the Top Cover is removed the ground strap and associated screw **MUST BE REINSTALLED** prior to Top Cover screw replacement. **FAILURE TO DO** this may cause **INGRESS** and/or **EGRESS** emission problems.



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